Brenda Arellano Romero

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EDUCATION

North Carolina A&T State University | College of Engineering

Bachelor of Science in Computer Science | Focus in Data Science **2024**

Master of Science in Computer Science | Artificial Intelligence and Data Science **2025**

- **President of Society of Hispanic Professional Engineers (SHPE)** **2024-2025**
- **AIVi Research Student**
- **Upsilon Pi Epsilon Computer Science Honor Society**
- **Certifications:** Data Visualization (CodeCamp), Web Development & Software Engineering (CodePath), Cybersecurity (Code Academy), SQL (CodeAcademy and Data Camp)
- **Associate's In Engineering** | Focus in Software Engineering **2021**

WORK EXPERIENCE

DATA SCIENCE INTERN (Global Data) | Ford Motor Company **May 2024 – August 2024**

Collaborated with the Data Scientist to incorporate the application into existing data pipelines and servers, ensuring efficient data flow and real-time analysis; conducted comprehensive testing, debugging, and user training to ensure reliable and effective usage.

- Developed a Bivariate MLE Dash application for advanced data analysis and visualization, incorporating statistical models and algorithms to enhance KPI accuracy and improve workflow proficiency by **80%.**
- Applied Large Language Model (LLM) prompt engineering to structure the development process, applied consumer data knowledge for modeling design, resulting in improve of predctions for business goals.
- Redesigned the functionality and user experience of the Dash app, achieving a **30%** improvement in calculation accuracy by implementing a snapshot code state feature, wrote code for data analysis using SQL, Python and Azure Databricks ensuring scalability for testing.

EDUCATOR | Lululemon **August 2023 - Present**

Leveraged product knowledge and interpersonal skills to connect with local communities, foster relationships, and create a welcoming environment that promoted repeat business and seamless inventory management.

- Tracked and analyzed KPIs to better understand audience engagement with products, increasing sales by **120%.**
- Achieved operational efficiency in back-of-house tasks by effectively restocking and organizing inventory, ensuring product availability on the floor and contributing to consistently meeting daily sales quotas.

OPERATIONS SPECIALIST | Tencarva Machinery **October 2021 - August 2023**

Collaborated with a dynamic team of engineers to optimize construction plans utilizing AutoCAD, Microsoft tools, and Azure (IFS), enhancing efficiency and project outcomes.

- Led team of **four** people while managing a panel shop with production planning and quality control.
- Applied advanced Excel techniques and integrated insights from both training sessions and observations, resulting in a notable **65%** improvement in shop production accuracy.

ACCOUNTANT | Ziehl-Abegg **February 2018 - October 2021**

Performed accounts payable (AP), accounts receivable (AR), payroll, and bidding processes, and handled the notarization of contracts, contributing to cost savings, time efficiency, and enhanced improvements.

- Directed the transition to a **90%** paperless and digital accounting system, streamlining reporting and accounting procedures to improve efficiency with advanced software systems.
- Collected over **60%** of aged collections within my first year by analyzing data and reports to identify discrepancies and recover missing funds, significantly improving overall business performance.

PROJECTS & SKILLS

KEY SKILLS: Accounting 8 years, Bilingual, Leadership, Data Interpretation and Predictions, Project Management

TECHNICAL SKILLS: Programming Languages (Python, R, Java, C++, SQL, JavaScript), Front-End (CSS, HTML, JavaScript), Azure Databricks, Audience/Media data, Tableau, AutoCAD, Canva, SolidWorks, GitHub, GitHub Copilot, Data Visualization, Matplotlib, Model Development, Machine Learning, Blender, Unity, Virtual Reality Development

BIVARIATE MLE DASH APPLICATION | Python, NumPy, Pandas, Matplotlib, and SciPy. ***2024***

- Created a Dash-based web application for in-depth Maximum Likelihood Estimation (MLE) analysis, utilizing Dash and Dash Bootstrap components to create an intuitive and interactive interface.
- Integrated data processing and visualization techniques to enable comprehensive analysis and insightful data representation, featuring a robust server architecture for smooth operation and real-time data analysis.

COVID-19 IMAGE GENERATION | Python, PyTorch, Gradio, Django, Jupyter Notebook, GitHub **2024**

- Developed a CNN model to analyze scans and provide test results indicating COVID or non-COVID status by training the model with labeled datasets.
- Created a GAN model to generate synthetic COVID and non-COVID images, enhancing the dataset for further model training and testing.